

conductor, and is positioned by", and delete the words: "Figure", "shown as conductors", and "with".

In the Claims

In light of the rejection of all of the claims by the examiner, amendments to the claims are extensive. So, Applicant lists the amended claims below. The detailed deletions and additions to the claims can be found in Appendix B.

Amend claims 1 through 16 to read as amended claims 1 through 10, as follows:

1. A capacitive sensor for sensing a level of a fluid in a vessel, the sensor positioned proximate the vessel and separated from the fluid by a dielectric wall of the vessel, the sensor comprising:

at least two coplanar electrical conductors attached to a substrate and electrically insulated from one another, the conductors separated from one another by spacing, the spacing equal to at least two times the thickness of the dielectric wall, the conductors forming a fringing field capacitance, the value of the capacitance changing in response to changes in the level of the fluid;

at least two of the conductors driven by an alternating current electrical signal, the value of the fringing field capacitance indicative of the level of the fluid.
2. The sensor of claim 1, wherein the conductors each have a width, at least two of the conductors that form the fringing field capacitance having an average width and an average spacing, the average width being equal to, or less than, one fourth of the

average spacing.

3. The sensor of claim 1, wherein at least two of the conductors are configured as interdigital combs, zigzag lines, sinusoidal lines, or meander lines.
4. The sensor of claim 1, wherein at least a portion of the substrate is removed from the area of the spacing, forming an opening, gap, or depression in the surface of the substrate that faces the fluid.
5. The sensor of claim 2, wherein at least two of the conductors are configured as interdigital combs, the combs having fingers, the fingers inclined with a slant from horizontal, the value of the fringing field capacitance changing in a continuous fashion in response to changes in the level of the fluid.
6. The sensor of claim 2, wherein the conductors are thin metallic structures mounted onto a thin dielectric substrate, the sensor being flexible to conform to an irregular dielectric surface of the vessel.
7. The sensor of claim 1, wherein the sensor has first and second faces, the first face of the sensor positioned proximate a dielectric wall of the vessel, the second face positioned proximate a front surface of a spacer;

the spacer comprising a bulk dielectric material having a relative permittivity and a

thickness, the bulk dielectric material having a relative permittivity of less than 2, and a thickness of at least two times the thickness of the dielectric wall.

8. The sensor of claim 7, wherein a back surface of the spacer is attached to an electrically conductive material that is connected to an electronic circuit or to ground.

9. A capacitive sensor for sensing a level of a fluid in a vessel, a dielectric wall of the vessel having an inner surface and an outer surface, the inner surface facing the fluid, the sensor fully embedded within the dielectric wall of the vessel, the sensor comprising:

at least two coplanar electrical conductors electrically insulated from one another, the conductors each having a width, the conductors together having an average width, the conductors separated from one another by spacing, the conductors together having an average spacing, the average spacing being at least four times the average width of the conductors.

10. The sensor of claim 9, wherein the dielectric wall has first and second thicknesses, the first thickness being an average distance between the conductors and the inner surface of the vessel, the second thickness being an average distance between the conductors and the outer surface of the vessel,

the first thickness being equal to less than one half of the average spacing, the second